

IN THE CLAIMS:

1. (Currently Amended) A photomask blank comprising a transparent substrate by which exposure light is transmitted, at least one layer of light-shielding film and at least one layer of antireflective film both on the substrate, and a seed layer disposed between the transparent substrate and the light-shielding film or the antireflective film, said seed layer being formed of a chromium material containing at least one of oxygen, nitrogen and carbon, and said seed layer having a thickness of 0.5 to 5 nm.

2. (Original) The photomask blank of claim 1 wherein said light-shielding film or said antireflective film is formed of a ~~chromium material containing at least one of oxygen, nitrogen and~~ carbon.

3. (Cancelled)

4. (Original) The photomask blank of claim 1 having a surface roughness (RMS) of up to 0.9 nm.

5. (Original) A photomask fabricated by lithographically patterning the photomask blank of claim 1.

6. (NEW) The photomask blank of claim 1, wherein said seed layer is a chromium oxide nitride, a chromium oxide carbide or a chromium oxide nitride carbide.

7. (NEW) The photomask blank of claim 1, wherein said seed layer is a chromium oxide nitride having a chromium content of 25 to 60 atom %, a nitrogen content of 2 to 50 atom % and an oxygen content of 5 to 60 atom %.

8. (NEW) The photomask blank of claim 1, wherein said seed layer is a chromium oxide nitride carbide having a chromium content of 25 to 60 atom %, a nitrogen content of 2 to 50 atom %, a carbon content of 2 to 50 atom % and an oxygen content of 5 to 60 atom%.

9. (NEW) The photomask blank of claim 1, wherein said seed layer is a chromium oxide carbide having a chromium content of 25 to 60 atom %, a carbon content of 2 to 50 atom % and an oxygen content of 5 to 60 atom %.

10. (NEW) The photomask blank of claim 1, having a surface roughness of 0.7 nm or less.

11. (NEW) A method of manufacturing a photomask blank comprising a transparent substrate, at least one layer of light-

shielding film and at least one layer of antireflective film both on the substrate, and a seed layer disposed between the transparent substrate and the light-shielding film or the antireflective film, said method comprising:

forming said seed layer on said transparent substrate by effecting reactive sputtering using a target of chromium or chromium containing at least one element of oxygen, nitrogen and carbon and a sputtering gas containing at least one each of a carbon-containing gas, a nitrogen-containing gas, an oxygen-containing gas, and optionally an inert gas, said seed layer having a thickness of 0.5 to 10 nm;

forming said light-shielding film; and

forming said antireflective film.

12. (NEW) The method of claim 11, wherein said seed layer has a thickness of 0.5 to 5 nm.

13. (NEW) The method of claim 11, wherein said seed layer is a chromium oxide nitride, a chromium oxide carbide or a chromium oxide nitride carbide.

14. (NEW) The method of claim 11, wherein said photomask blank has a surface roughness (RMS) of 0.9 nm or less.

15. (NEW) The method of claim 11, wherein said photomask

blank has a surface roughness (RMS) of 0.7 nm or less.

16. (NEW) The method of claim 11, wherein said seed layer is formed at a pressure of 0.1 to 1.0 Pa and a power of 3.9 to 11.0 W/cm².